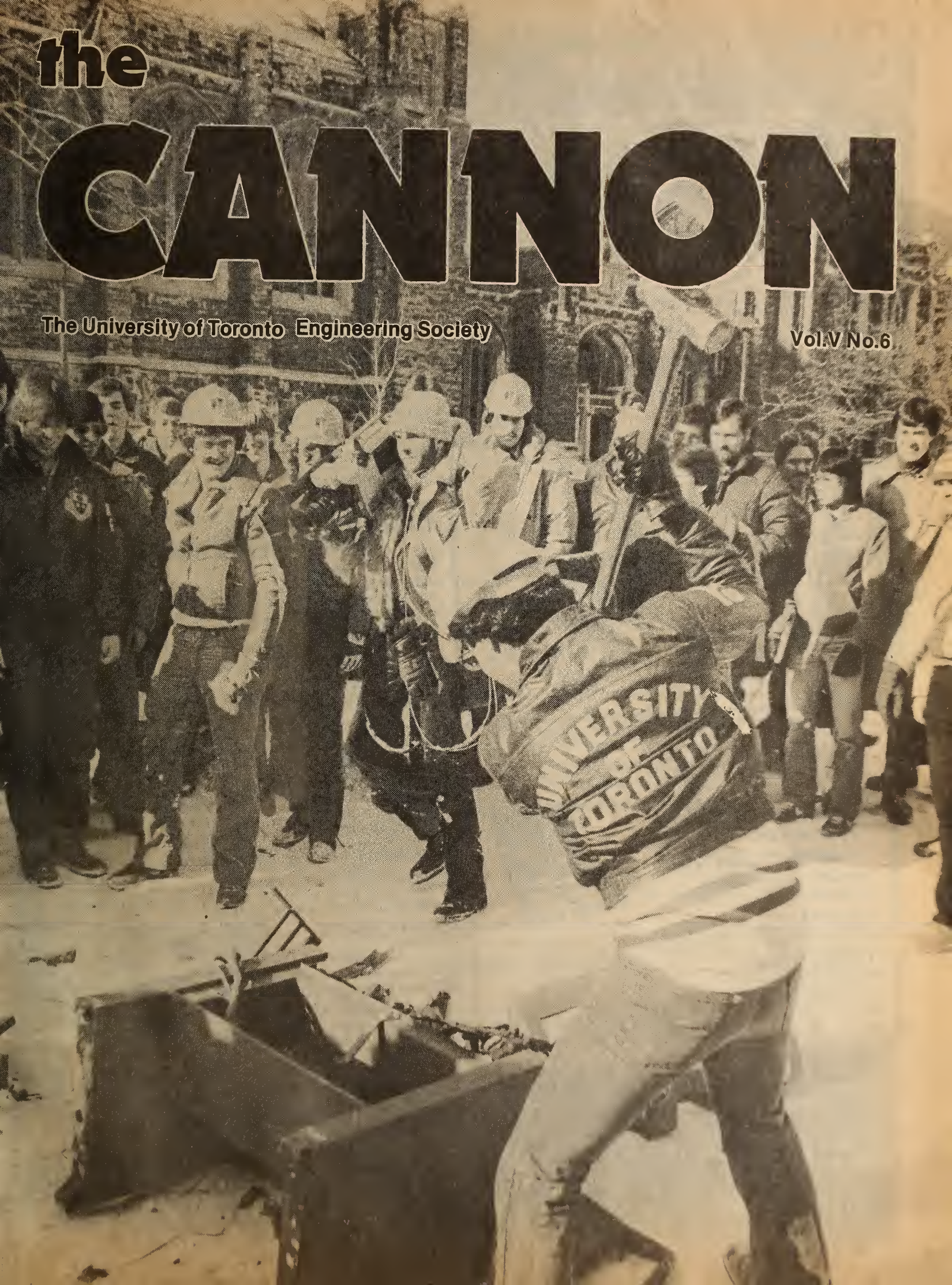
the CANNON

The University of Toronto Engineering Society

Vol.V No.6



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the CANNON

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With the annual review of the $100 special fee fast approaching, the Cannon spoke with Dean Slemon about its success. page 7

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A concerned Engineering Science student speaks honestly about educational tactics within the Faculty and their detrimental effects on students. page 10

Institute for Hydrogen Systems Receives Special Car
This new institute set up under the auspices of the University has recently acquired an unusual hydrogen fuelled Buick. page 11

Dealing With Sexual Harassment
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Design A Car!
1986 will bring the urban vehicle design competition. You better start brainstorming now. page 15

All-Canadian Engineering Student Convention
The Congress of Canadian Engineering Students recently met in Vancouver for a successful exchange of ideas. One of the U of T delegates reports on the conference. page 16

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Relatively isolated from many of the crises which society faces, engineering students should consider their positions on issues which are of technical import and social consequence. page 18

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Engineers protest the lack of adequate computing facilities - they are seen here keypunch bashing.

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Editor's Notes

Engineers are undoubtedly considered one of the most vocal, publicized and fun-loving (or obnoxious — depending on the vantage point) groups on any campus. Here at SKULE we also publish a newpaper which is notorious not only on it's own turf but through the halls of many Canadian universities. Aside from the infamous Toike Oike, many engineering antics are strongly criticized through various media and by various persons. As a group, engineers appear to be of unusual bravery, and consequently, remain undaunted by such abuse.

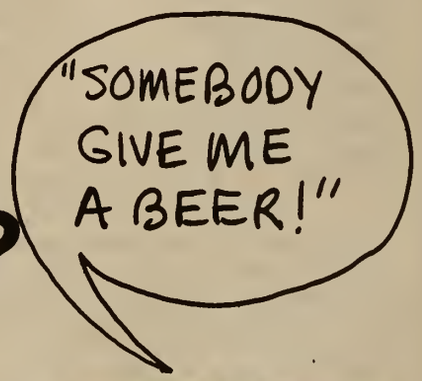
A vigorous dialogue between individual engineers, through their own publications, is noticeable by its absence. This seems strange from a faculty which is often the controverial centre of media attraction. Almost every college publication on campus will print letters from students expressing views on issues which arise within their faculty or without. It would appear that, as a whole, engineers can easily defend, or refuse to explain, their actions by a united stand of brawn. Yet, as individuals, we are unwilling to argue contentious issues with our peers. Thus, and unfortunately, we present an unfair image of ourselves to our contemporaries as sheep who simply follow each other into whatever unknown escapade, in the name of the almighty engineer.

Without a doubt, the engineering students at the University of Toronto are exciting, dynamic, responsible and original thinkers. But this is not enough — we must prove it. The Cannon can provide an excellent forum for discussion for issues which should be of interest to the engineering student population. Issues such as the Toike Oike, the actions of the Engineering Society, the $100 Incidental Fee, key-punch bashing and nuclear disarmament. For this reason, I urge you to take the time to consider these questions and respond by dropping a letter in the Engineering Society offices. As you will see in this issue, some students have already done this and I am sure you will discover that it makes for lively reading.

* *

So You Have Not Had Enough Of

George Kash and the Oktoberfest Express?



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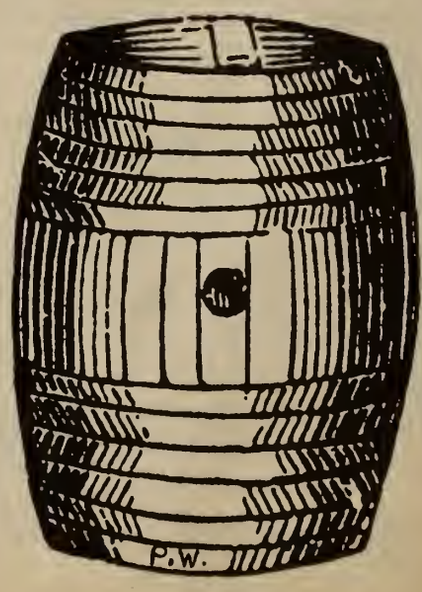


Letters to the Editor

Students Ignored?

Dear Editor,

With the passing of each day I become more convinced that the administration of this university couldn't care less about us, the students. Students, you say, who are they? All you big-wigs at Simcoe Hall, in your newly renovated offices, pay attention now. The students are the heart and soul of this place, and if you don't start believing it, then step off your pedestals and let people who understand our needs take your places.

Very recently, a number of instances clearly illustrated the lack of concern for student needs. Recall the recent 'keypunch bash' staged by engineering students. Why must students use obsolete equipment while certain administrators can afford renovations tallying a mere half million dollars? Does an old desk not serve the same purpose as a new one? I can assure you that an old keypunch is worthless in preparing students to use modern technology. Donald Ivey (Vice-President, Institutional Relations) "covers his ass" by stating that the half million dollars was to make the space more effective (*the Newspaper*, Jan. 26, 1983). Mr. Ivey, the Engineering Society could have supplied enough manpower to move the furniture at no cost whatsoever. Surely, the money could have been better spent at an institution that is supposedly for *students*.

But wait, that's not all. Now, the powers that be feel it is their duty to act as a watchdog organization. I am referring to the recently proposed amendments to the Policy for Compulsory Non-Academic Incidental Fees. These amendments, if passed, would allow Governing Council to suspend incidental fees as "a means for dealing with the sexism and racism present in certain student newspapers" (*The Varsity*, Jan . 26, 1983). It is a sad day when the people who claim to run this university feel that the students' important needs have been sufficiently satisfied, and they can put their efforts towards areas that are outside their jurisdiction to begin with.

So there you have it. Hopefully, someone out there is listening.

Barry Levine
Ind Eng 8T4

Keypunch Bash

Dear Editor,

The television reporting of the keypunch bash on City-TV and the ensuing televised debate with U of T V.P. Nowlan, SAC President Tim Van Wart, and our Eng. Soc. President Wayne Levin was most interesting.

I would like to take exception to V.P. Nowlan's argument regarding the current archaic computer services that we use. Nowlan argues that modern or antique, the computer systems we use adequately teach us the fundamentals of computing. He stated that while he agreed and sympathized with us that the keypunches in the annex are outdated and in bad condition, he felt that we shouldn't complain so much because we are learning the basics of computing.

Many students are well aware of the $500,000 spent by Simcoe Hall on office renovations last year. The offices that were renovated already existed; they were just redecorated and modernized to the tune of half a million dollars.

To operate in an office requires desks, chairs, telephones typewriters, and various other small items (cabinets, pens, etc). The facilities that existed were more than adequate to run an office for the 8 or so people who work there.

The facilities I just mentioned already existed and although they weren't up to date, they were very useable. Yet Simcoe Hall considered that the office renovations were of the highest priority.

What Vice President Nowlan should learn is how to pull the wool over someone else's eyes. or better yet, how about coming up with $500,000 for some computer renovations. The equipment we have is nowhere near adequate. Nowlan certainly doesn't ride a horse and buggy to work (although it gets the job done), and we should be able to have proper resouces for our education.

Paul Shindman
Mech 8T4

Eng Soc. Prez Review

Dear Mr. Levin,

I strongly take issue with your conception of the scope of issues affecting students that you imply in the President's Message in the November Cannon. Specifically, I wish to point out the relevancy of Nuclear Disarmament and support for Solidarity, the two issues which you single out as examples of SAC's misguided attention. Furthermore, I would like to suggest that a broadening of vision on behalf of the Engineering Society would work towards the interests of everyone on campus, engineering students included.

To begin with, students do not live in a vacuum, but are subject to a variety of external forces. Some of these originate from international events such as cartel formation or global economic recession, and others are a result of politicians heeding their perception of public priorities.

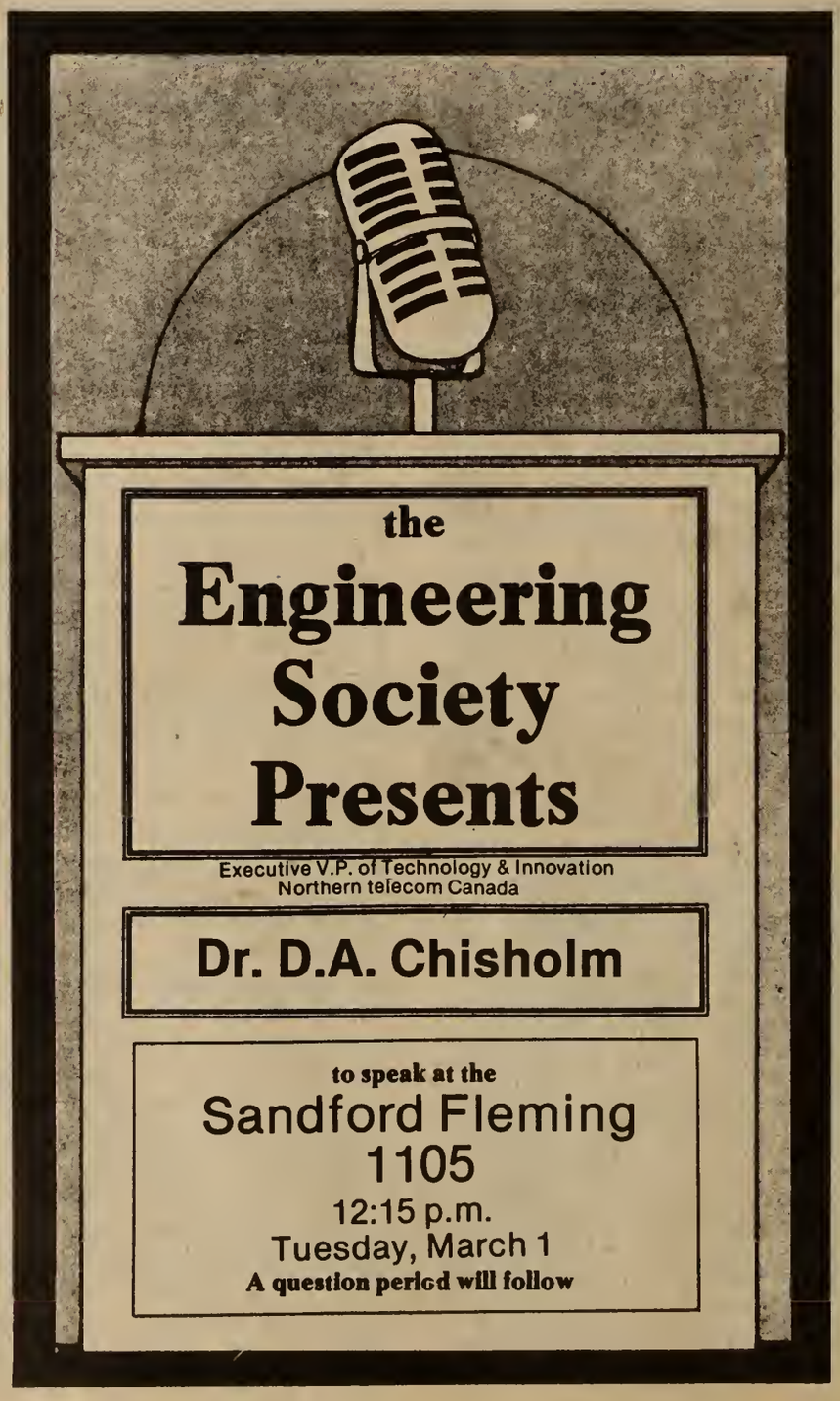
International events are often felt indirectly through inflation, unemployment and higher tuition fees for students. One international event in particular would be felt more directly. Although we would all prefer not to consider the possibility of nuclear war, it is reasonable to assume that given its location and strategic importance, Toronto would be targeted in a nuclear exchange between the superpowers. Unless plans are being made for a U of T multi-million dollar deep underground bomb shelter, it would seem quite certain that students would be somewhat affected along with hundreds of thousands of other mutilated, crushed, burned and vaporized people in the downtown core.

Although the scenario just described could result from a political decision (if it doesn't happen by accident first), we are more accustomed to politicians affecting us less dynamically Reductions in funding for universities occur because politicians gauge that this action is less politically costly than some other cost-cutting or revenue-raising measure. With University systems, student needs will not be met unless senior administrators are given cause to connect fulfillment of these needs with their own job security.

Relating our concerns as students to support for Solidarity, if we examine the conditions of workers in a totalitarian regime and compare them with the situation of University students we can find notable parallels. Both U of T students and Polish workers are controlled by systems which could not operate without their existence, and yet for the most part provide them with very little opportunity for input into the decision making process. As students, there are two major concluslons that we can draw from events in Poland. The first is that substantial changes in administrative policy can be achieved by those at the bottom of the hierarchy acting in "solidarity". On this level we can or at least could have shown our support. The second conclusion, being of less immediate relevance here given the present state of student activism, is that it is possible to push too far.

I would like to relate the previous two paragraphs to your comments in the December Cannon concerning Simcoe Hall's inverted priorities. Certainly it is ludicrous that $500,000 of office renovation should take precedence over a $50,000 wheel chair ramp or that

continued on page 22



An Interview With Dean Slemon

Incidental Fee Ideas

The Cannon: What was the original motivation for instituting the $100 incidental fee?

Dean Slemon: In the period before instituting the fee we had come up with an estimate of the shortfall in the faculty budget of about $2.5 million per year. A major part of that was equipment and supplies which had been particularly depleted in the five years that we've been making cuts. The figure of $100 was rather arbitrary but about 10% of this shortfall. We hoped to lever this 10% up to 100% by appealing to other people.

The Cannon: So its purpose was really then to attract attention to the faculty's underfunding?

Dean Slemon: That is correct. We've been feeding out the message for some time and everyone had said - "Well they can tighten their belts a little bit more." Every indication is that this is finally helping the message get across.

The Cannon: There are basically three groups at whom this message is being directed - alumni, industry and government. What has their reaction been?

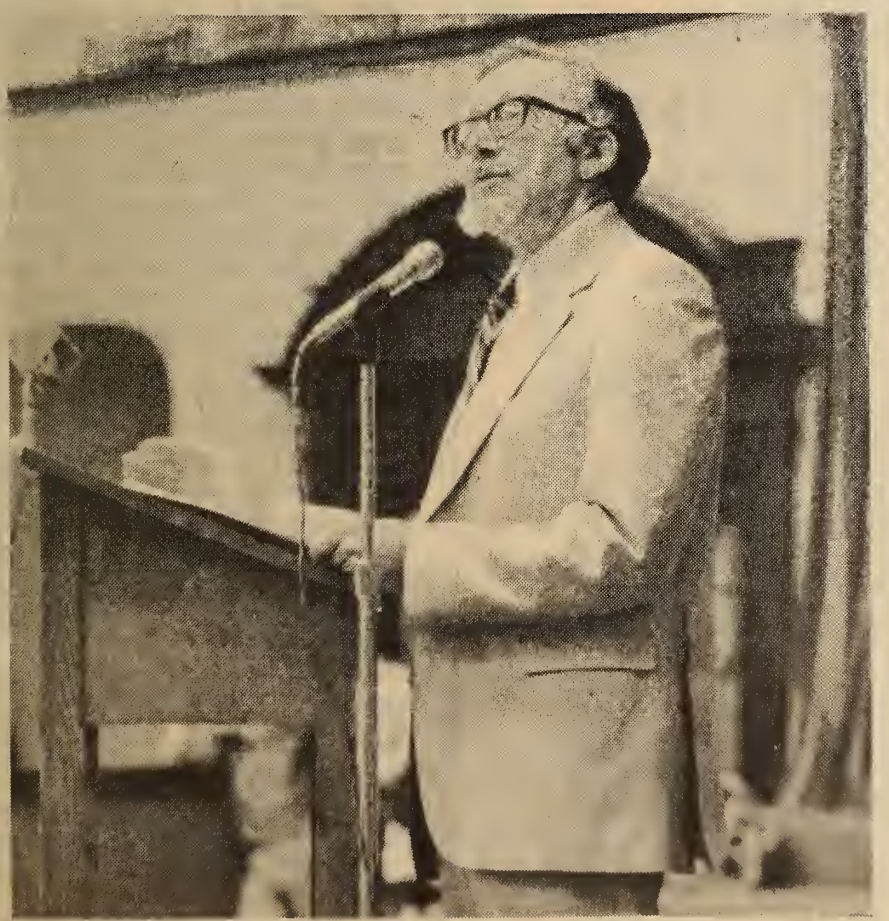
Dean Slemon: With alumni the response is not as good as I would want alumni response to be eventually, but this is something one has to work at year by year, but our donations this year are running at about 250% of last year. For an alumni organization that is a very dramatic increase. During the calendar year of 1982 we may be approaching $200,000 so it is coming close to matching undergraduate student contribution. We must remember that we have really not had much more than 6 months in our campaign with them and the results are a definite improvement.

This has not been a good year to approach industry. There are many industries who say they are definitely behind us, but not now - "don't ask for money from us this year when we are laying off people." We have had a major donation from IBM this year - $6 million of computer equipment which we have benefitted from very directly in our first year facilities. We have also had smaller donations but we haven't really launched a campaign in that area - just a bad year to do so.

I couldn't say that anything is really shifted in the position of government. They still take the attitude, and probably will continue to do so, of saying they won't interfere in how the university allocates its money. Because we can't approach government directly, a number of us who are deans of engineering are asking industry to approach government on our behalf. The tactic here is to say to industry that they are very dependent on the kind of innovative, creative people we turn out and if we're not able to provide them the other things that you're trying to do to build up industry in Ontario just won't happen so would you go to government and say, this is something that government and industry share as a concern - we've got to do something about it.

The Cannon: That could happen now that a lot of the new centres opening are under the financial wing of government.

Dean Slemon: Yes and it's very consistent with that, and we can



Dean Slemon

say, at least industry can say to them (government) that if they are putting $100 million into new technology centres and $100 million into IDEA CORP. they've got to be sure they've got the materials for it - and we provide it. We hope that this will be an effective argument that allows government to provide us some extra funding - at the very minimum to make sure that we are well equipped.

The Cannon: The fact still remains that students are interested in knowing exactly where their money has gone, and how it has been divided.

Dean Slemon: 90% of the money went to various departments that provide the programme to students and in direct proportion to the programme. You would have to go to individual departments to see how it was specifically allocated. In an attempt to get something that was nearly fair, we looked at the number of students enrolled in courses given by the department and then multiplied that by the weight of the course. Another 10% went to some general things, such as providing equipment for the micro-processor course, providing some assistance in the first year graphics course and a limited amount to geology to provide for their services to our geological engineering. Each department was then fairly free to allocate within the constraint that it go only for equipment or supplies and a very limited amount for teaching assistants.

When we come to the accounting (some time in February or March) it is mainly a matter of Departmental Chairmen reporting on the general approach they took in their departments. I know that in some departments the students have had a very definite role in saying how the money should be spent.

The Cannon: Are there any other Universities who have considered implementing such a fee?

Dean Slemon: Waterloo introduced a proposal, ran a referendum and rather regrettably, in my view, the referendum lost. It is difficult and we were very fortunate in the particular kind of leadership the student body had at the time this went through and the very effective way that the engineering society council put the case before the students. I was very pleased because it has had such an enormous impact on our relation with the community.

The Cannon: What percentage of our education do we, as students pay?

Dean Slemon: For the whole of the University, my understanding is it is around 13%. For APSC I think it is probably lower, in the sense that while the fees are marginally higher than for the average student since the cost per unit at least ought to be higher than the average, in the sense, that we receive 2 basic income units on behalf of engineering students as against 1-1 1/4 for Arts and Science students. What we receive on behalf of each engineering student is something like $8000/year for each student from government.

President Ham has expressed the view, not always popular, that students should pay up to 20% of their education. If it is a question of preserving quality then there is no doubt in my mind that we go for a higher fee. I sensed last year that, reluctantly, would be the response of students - because quality means more.

SKULE NITE 8T3

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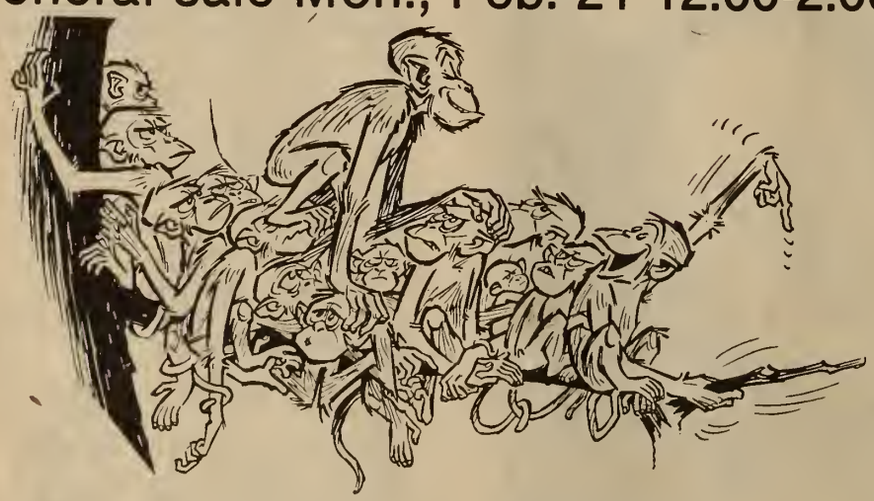
Advanced sale Fri., Feb. 11 12:00-2:00

General sale Mon., Feb. 21 12:00-2:00



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Tickets available outside the Eng. Stores

Let's even take the extreme of another $1000, or another $4000, that is a relatively small mortgage in comparison with other debts one may take on.

What I have seen is the government cutting back on the contribution to higher education every year a few percent. We will go back again 3% this year as we have done every year for the past 9 out of 10 years.

If we let quality go to a point where it won't be effective in the marketplace - not only students will lose out but the industries won't be there, the economy won't be there and we won't be producing what we ought to - doesn't make sense in any way at all.

This is not an easy argument to win but it is one we have shied away from in the University, except for this Faculty - and we are still the only Faculty in the province to take a step like this.

The Cannon: How long, then, is it planned that this fee will continue?

Dean Slemon: It is a three year programme with a provision that it can be rescinded at any point with a two-thirds majority (of the Engineering Society Council). It is subject to an annual mini review. This done by either the Engineering Society executive or the council who are to meet with myself, the Associate Deans and Department Chairmen.

The Cannon: Is there anything you wish to add concerning the fee generally?

Dean Slemon: As I mentioned it was 10% of a deficit and we had to take another budget cut last year so we can't expect anything miraculous to happen with the $100. We are dealing with a $15 million budget in the faculty and 750,000 is not much. On the other hand, it is bigger than our equipment budget and a very large part has gone into equipment. Considering 95% of the budget is in some form of salaries - having 1-2% of flexible money is extremely valuable.

I hope the concept of the fee will see a payoff in 3 years. The really big payoff from alumni is going to come in building up habits - to the extent that students now see alumni as having an effect. The idea grows - "will alumni make donations to my faculty and when I'm an alumnus I presume I am going to have to do the same". That is something you don't see here and it ought to be happening.

Many things could happen after three years. If I had a choice I would prefer to have the Ontario government give us the ability to fix fees at the level to maintain the kind of quality standards we set for ourselves. We are in a very favourable situation because the quality of students we are taking in is really excellent. There is a standard of education that ought to go with that. Government is very unwilling at the moment to give us any freedom at all, so therefore, this move on incidental fees. If we had been able to do it my reaction would have been to recommend a budget which justified to anybody - this is how much government is willing to give us - this is how much we need for fees. If that approach could be brought about the incidental fee would disappear, but it would re-appear as a larger basic fee.

Professional Ethics vs. Educational Realities

Students Overloaded

Nick Bilaniuk
Eng Sci 8T5

It's Saturday noon, and you've just gotten up, having spent Friday night relaxing after another difficult week of school. You feel that you deserve more time to yourself, more time to breathe, sleep, listen to records and enjoy the company of friends. You glance at your checklist of assignments due next week to see how much more time you can really afford to lose. "Let's see... there's a chemistry lab report due Wednesday, differential equations, calculus and physics problem sets Thursday and electricity formal lab Friday..."

On the face of it, the situation looks pretty grim. You can't afford to leave all that until Monday and Tuesday night. Actually, just a single lab report, carefully written and polished, would take all weekend to do. And that physics course - it's so confusing that you have no idea how to begin that problem set, let alone have the time to do it. And then there is an assortment of tasks that you won't even bother with because none of them needs to be handed in.

An impossible feat for a normal human, completing all that work? Well, yes. Time to give up engineering and move to the Faculty of Forestry? Most assuredly not. After all, everything will be written up and handed in on time, and much better than a normal human could have managed, at that. Engineers are enterprising types; we have our ways.

Joe's a year higher, and he did that chemistry experiment last year. From his lab report- it only earned an average mark, but what the hell - a new and better version can be fashioned quickly. Note the demonstrator's tastes and preferences, make the necessary improvements, substitute your data (if you wish, and only if it wasn't botched) and presto! An A+ lab report, with minimum effort. Only seldom is it necessary to fabricate data from scratch, which can be a very time - consuming process.

Lab reports might as well be copied anyway, because you are not tested on the material. Time is better spent on problem sets. And you're safe all the same, because the demo won't notice he's reading a report from last year over again (should it be the same guy). Even if he did, everybody plagiarizes (oops, "makes use of available resources" you meant to say), so it would be unfair to single you out. In short, if you don't copy, you are putting yourself at a disadvantage.

Further, while extensive bibliographies may look impressive, you certainly won't cite another lab report in it, because giving yourself away so blatantly is a costly thing to do, the fact that scholars legitimately use others' manuscripts not withstanding. Typing up that report is boring, but you want to do a "kiss job" so your little sister is conned into doing it.

And then there are the problem sets. Problems indeed. You note with considerable anger and contempt for the professor that the problem sets are insanely difficult, and don't seem to have anything to do with the lectures. Come to think of it, the lectures don't make any sense in the first place. Here too there is a path to salvation. Mark's a keener, he'll have those problem sets licked no matter what. Unfortunately, he'll do them all the night before they're due. That means frantic copying during those Thursday morning lectures, but at least the problem sets get handed in.

It's foolish not to get them from someone. If you don't do

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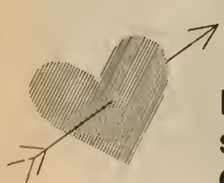
Class of 8T3 presents

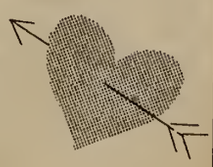
A COMPUTER DATING VALENTINES PUB

Friday, February 11, 1983

4:00-8:00 p.m. Sandford Fleming Pub



Every person guaranteed a list of five people of the opposite sex, who matched up best with their personal computer input*. Questionnaires available from Club Chairmen and the Engineering Stores for $1.



* Must be registered by noon Wed. Feb. 9 Turn questionnaires into the Engineering Stores or the Engineering Society offices.

New U. of T. Acquisition

Hydrogen Powered Vehicle

Martin Burnham
Mech 8T5

The Institute for Hydrogen Systems (IHS) is directed by Dr. David Scott of the U of T Mechanical Engineering Department, and is associated with the U of T Faculty of Engineering. It has recently acquired a 1979 Buick Century sedan which runs on liquid hydrogen(LH_2). The car, which has a 3.8L turbocharged V6 engine, modified to burn LH_2, was donated to the IHS along with several pieces of LH_2 equipment including two different cryogenic storage tanks and dewars, and a semi-automatic refueling system, by the Los Alamos National Lab (LANL) in New Mexico, after funding from the U.S. Department of Energy for the two and a half year old project ran out.

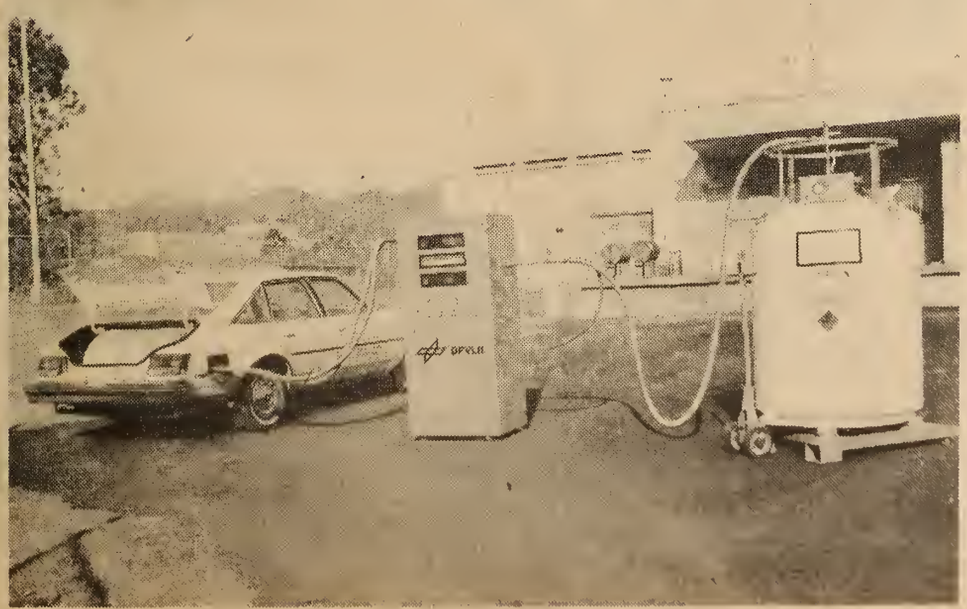
Research done at the LANL involved acceleration, constant speed and hill climbing tests using the original dewar. This dewar was designed and constructed in West Germany by DFVLR, the German equivalent of NASA. It is made of aluminum and has a capacity of 110 litres.

This dewar has since been removed and replaced, and it will be a key part of the research being performed by the Thermo-Chemical Technologies division of the IHS. The replacement dewar is a joint design and construction project by DEVLR and the LANL. It has an aluminiumn outer shell with two inner copper vapour-cooled thermal radiation shields and a stainless steel inner vessel with a 155 litre capacity. Hydrogen is stored in both tanks at near -252°C (21K). Hydrogen's saturation or boiling point is around 21K.

With this larger tank, the car has a distance range of 375km, which is roughly 41L/100km (6.6MPG) at Los Alamos, which is 2.4km (7500') above sea level (altitude adversely affects performance).

In the 17 months of actual vehicle testing at the LANL, many technical problems arose. The engine exhaust which is used to drive the turbocharger at speeds of 20-125 thousand r.p.m., is largely comprised of water vapour. When these tiny water droplets bombard the turbine, the resulting abrasion causes a serious pitting of the blades, eventually reducing turbo efficiency and service life.

To make matters worse, water must also be injected with the incoming hydrogen to retard preigntion, a phenomena which can cause serious internal damage to the engine, and to slow the flame speed to reduce backfiring into the intake manifold. (Alcohol is added to this water as a winter antifreeze, with improved performance as a byproduct). The IHS will not be performing any research into improving mileage and performance or eliminating engine related technical problems, since funding for this research has already been allocated to the Engine Research and Development Laboratories at the U of T Mechanical Engineering Department through Ministry of Transportation contracts. Instead, the IHS will be focusing its efforts on research into liquid hydrogen storage tanks, especially on-board cryogenic dewars, and liquid hydrogen refueling systems. The car will be used for actual in service testing of these dewars and for testing refueling systems (at 41L/100km, refueling is a major consideration), while the engine basically just consumes the LH_2. It is apparent that at 41L/100km, LH_2 in this engine is not a competitive alternative fuel; however, the IHS believe that LH_2 will eventually penetrate into the transportation sector, not for private automobiles in the near term due to the intricate refueling infrastructure, but rather for vehicles such as



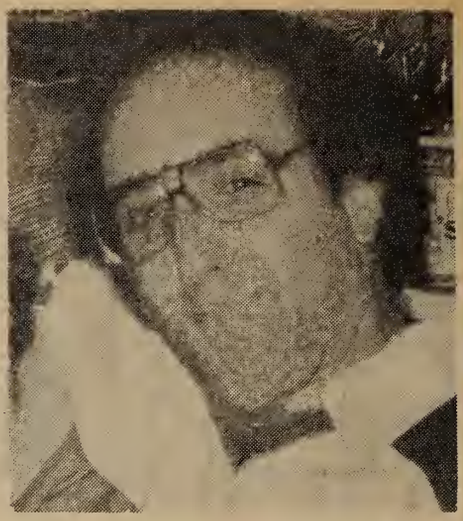
continued on page 22

February

Sunday	Monday	Tuesday	Wedn
		1	2
6	7 *Toike Submissions Deadline 12 noon*	8 *Women's Dinner*	9
13	14 *E.A.A. Ski Day* *Osler Bluffs* *St. Valentine's Day* *Reading Week Begins*	15	16
20 *E.A.A. S-point Mtg.*	21	22	23
27	28		

sday	Thursday	Friday	Saturday
	3 *Eng. Soc.* *Exec. Mtg.*	**4** *Beer Taste Off*	**5**
	10 *Industrial Dinner*	**11** *Eng. Soc.* *Nominations Open* *Sandford Flaming Day* *Open House* *Sandford-Galbraith Complex* *Last Day for S-point forms* *Pub*	**12**
	17	**18** *Reading Week Ends*	**19**
	24 *Eng. Soc. Meeting* *Toike Oike*	**25** *Bock Fest* *Last Day to drop a spring term course without penalty* *Pub*	**26**
		Pub	

President's Message



Wayne Levin
Ind 8T3

On Thursday January 20, 1983, a crowd of undergraduate Engineering students gathered in front of Simcoe Hall. Their mission was to indicate their displeasure with computing services. To this end, a keypunch machine was acquired (legally) and several students participated in its demolition. This event was not only successful in communicating to the decision makers our concern, it was imaginative and it had a unique engineering quality to it.

What preceded this event? I had meetings with two key players in the computing area of U.ofT. Both V.P. Nowlan and now former UTCS director Dr. Cohen were unaware that engineers still used the archaic Engineering Annex facilities. For some reason they did not know. Now they do. I am working closely with Associate Dean McCammond toward the goal of obtaining another VAX 780 with 50 terminals for 2nd, 3rd and 4th year students. Up until now, Simcoe Hall has promised this facility which is to come from Erindale. In essence, Simcoe Hall's promise has little validity. Erindale will not give up their VAX. U.ofT must acquire a new system.

Why are we still using this archaic system? I attribute this to two primary reasons. First, Simcoe Hall and UTCS have literally wasted millions. This is not an exaggeration. I could list off several projects whose plugs were pulled before completion, or where the resulting system's performance proved to be wholly inadequate. On the top of the list is VIVA, an interactive system whose plug was pulled before completion after 4 years work and at least $800,000.

The other reason for our batch computing system results from a mismatch of priorities. It is not politically beneficial for Simcoe Hall to upgrade and modernize computing facilities. This is because, until now, there was no one actively pursuing a change.

The faculty is committed to the cause. One suggestion coming from the Dean's office is that we support a new facility with the incidental fees. I am opposed to this for the following reason: it is one thing to turn around a trend created from underfunding; it's another to pay for someone else's incompetence. Remember, the University has wasted millions in the computing services' operations. Let them pay for their mistakes.

Since the keypunch bash, a lot of attention has been given to the issue. There will be a meeting soon with all those involved. I am optimistic that if the heat stays on and remains on high we will get a new VAX 780.

This is where you come in. If you write a letter and send it to the editor of *The Varsity* and address it to V.P. Nowlan of Research and Planning you will be playing an important role in acquiring that new computer. This letter can be signed individually, or a collective effort signed by several. It is important that you do so. You may drop your letters off at the Engineering Society. I"ll see to it that it gets to the appropriate places.

A note to the F!rosh: You have everything to lose. Next year you will be using the keypunch machines on the high speed job stream unless an alternative arrives.

If all undergraduates participate, we will win.

ENG SOC NOTICE

Nominations will open on Friday, February 11, for elected positions on the Engineering Society for the 1983-84 term. The positions of President, Vice President: Administration, Vice President: Activities, Treasurer and Secretary are to be contested. Election rules, nomination forms and further information are available in the Engineering Society Offices, in room SF B670.

Coping With Sexual Harassment

APSC Deals With Problem

Paul Shindman
Mech 8T4

Engineering Society representatives on the Faculty Council helped bring a serious and sensitive issue to light at the Faculty Council meeting on January 26. A motion was passed by a large majority to have the Faculty investigate procedures to deal with any cases of sexual harassment or discrimination.

The motion presented by Eng. Soc. President Wayne Levin was that "The Campus and Community Affairs Committee of Faculty Council investigate procedures for dealing with any incidents of sexual harrassment and discrimination within the Faculty".

Following an in depth article published in a campus newspaper last November, there has been concern across campus on having guidelines in place dealing with this issue.

No Recourse For Harassed Students

The general feeling is that students who are harassed had no avenue of recourse, and that faculties had no guidelines to let them resolve cases of harassment or discrimination.

Many faculty members including professors from many departments spoke out in support of the motion. The consensus was that even though there may be no cases in the faculty, even one incident is one too many. Many students would not feel comfortable bringing a legitimate complaint to their chairman or to the Dean's office.

Student Competition

Auto Design

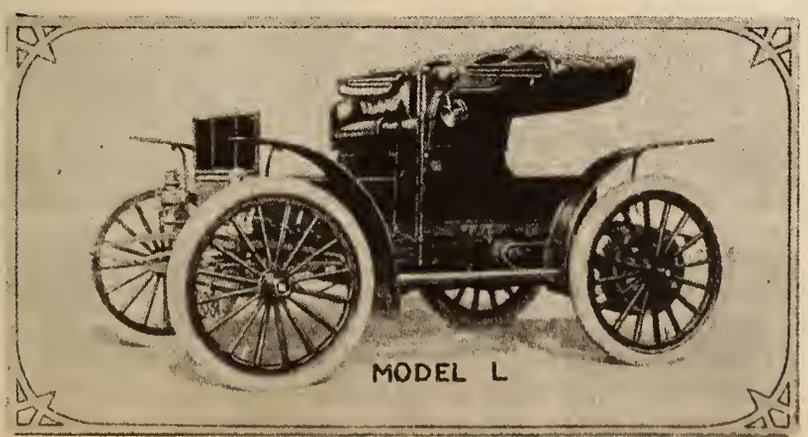
Ed da Silva
MMS 8T5

How would you like an opportunity to gain experience in "state of the art" auto design? How would you like an opportunity to visit Vancouver, British Columbia? How would you like an opportunity to meet university students from other parts of the world?

The University of British Columbia is hosting an urban vehicle design competition in 1986. It will be held in conjunction with the 1986 World's Fair in Vancouver. This exposition will "celebrate mankind's achievements in transportation and related communications". You will have a chance to mingle with captains of industry as well as other university students from Canada, the United States, Europe and the rest of the world.

Though the specifications and rules will not be finalized and published until Sept. of 1983, the idea is to build a safe, efficient vehicle which will carry 3 or 4 passengers. The emphasis will be on innovative uses of existing technology or new technology.

Imagine how good an experience of this sort would look on the resumé you send to G.M. and Ford.



ATTENTION: TOIKE WRITERS

The *Toike Oike* requires articles to be written.There is no particular theme for the next *Toike*; we are merely attempting to put together a collection of truly *humerous, original* material, as a good ol' fashioned *Toike Oike.* The deadline for submitted articles is Monday, Feb. 7, at 12 noon. Articles may be submitted to the *Toike* mailbox in the Engineering Society offices, SF B670.

Eng Soc. Sends Delegates

Eng. Student Conference

Barry Levine
Communications Chairman

The Professional Development Committee sends delegates to a number of conferences during the year. One of them is the Congress of Canadian Engineering Students (CCES), attended recently by Brett Calder, Chairperson of the Professional Development Committee; Wayne Levin, Engineering Society President; Paul Shindman, Executive Faculty Council Representative; Ed Da Silva, Second Year MMS representative and myself. The conference is held so that engineering students from across Canada can meet to discuss new ideas, learn more about the engineering profession and generally have a good time. The

purpose of this report is to inform the other 2685 engineering students at U of T what actually happens at a conference such as CCES; otherwise, sending delegates serves no purpose. So here goes...

This year's conference was held in Vancouver, British Columbia, at the Georgia Hotel from Jan. 5th to 9th. The theme of the conference was *'The Engineers' Task: Adapting to a Changing World'*, and many of the speakers alluded to it. The conference was attended by over 100 delegates, from 29 engineering schools across Canada. Our first day involved registration, orientation, a tour of the B.C. Hydro Facility and a reception.

Thursday, we got down to business. The morning consisted primarily of speakers. One of the more important lectures discussed the importance of human relations courses in the engineers' education, to avoid the pitfalls of what he calls 't.aditional management'. The discussion stressed the fact that we as students must be prepared to become more involved in implementing these courses.

The afternoon was comprised of a number of discussion groups among the delegates. I attended a workshop on a CCES publication presently known as *'Project Magazine'*. Queen's University has put a fair amount of research into a proposal for a Canada-wide engineering magazine for students. The purpose of this magazine would be to extend the functions of the CCES to a year-round basis with distribution to all engineering students. The original purpose was for a very high quality (read high cost) publication, which we were all skeptical about. I proposed a scaled-down version, much like the *Cannon*, at least until the stability of such a magazine is known. This is in fact the proposal that was agreed on. The magazine is hoped to appear twice yearly with submissions from engineering societies across Canada.

Report On Domed Stadium

Wayne participated in a discussion group dealing with the relationships between university student associations and engineering societies. It should be noted that Sherbrooke University recently pulled out of their SAC (along with a number of other professional faculties) because their SAC was not addressing the needs of the students.

On Friday morning, a report was given on the development and construction of the B.C. Place Stadium, the new domed stadium in downtown Vancouver. The entire design process is most remarkable. The roof design is so good that the double-layered teflon dome is supported by one fan rather than the planned four. Parking near the facility is poor; however, the stadium will be served by a new UTDS transit system (developed in Kingston).

In the afternoon, we were off to the UBC campus for the presentation of student papers. Our delegation presented four of nine papers, a very impressive showing indeed. Brett's paper, entitled *'A Silicon Foundry for Canadian Students'*, discussed the implementation of a service centre (by Northern Telecom) at Queen's University for the merging and fabrication of student designs in Very Large Scale Integrated Circuits (VLSI). Wayne discussed his work with the

Ontario Crippled Children's Centre, in which Bliss Symbolics are being used in the development of computer systems for non-verbal children. Paul's paper, entitled *'Computers in Engineering Academia — Some Prospects'* discussed current trends in academic computing, including the effects of new developments in pocket calculators, personal computers and so on. The effects of funding for resources and access were also discussed. Finally, Ed's paper introduced other engineering societies to the fact that the U of T Engineering Society is nearing its Centennial (1985), as part of our bid to host the CCES here in 1985.

Besides taking photos, I sat in on a presentation that should be of interest to students here. Shortly after our Incidental Fee was approved, the University of Waterloo attempted to implement a similar fee. As Waterloo has two engineering Societies ('A' and 'B') for each of the two streams in the co-op programme, it was required that a two-thirds majority was required from both societies to pass the proposal. Eighty-one percent of the 'B' Society students accepted the proposal, but only 55% fo the 'A' society students accepted it (in both cases, voter turnout was quite large). As a result, the proposal was defeated.

That evening, a pub was held at UBC. A live band was featured, but the turnout was poor and the band was not the best for a pub atmosphere. I would have to say that our pubs are pretty good, besides being financially successful.

Saturday morning featured a panel discussion entitled *'The Role of the Professional Engineer vis-a-vis the Role of the Technologist'*. The controversial topic of whether or not technologists should be granted professional status was debated at length, as it was at last year's conference.

That afternoon, the important plenary session was held. At this time, a number of motions were presented to the congress; many of them summarized the findings or actions to be taken by the congress, while some were purely in fun. A major success for our delegation was the acquisition of the CCES in Toronto in 1985. Other motions included: follow-up on the status of the technologists issue, the proposal for *'project magazine'*, thank-yous to the organizers and numerous ridiculous motions. Needless to say, by this time everyone knew one another and a good time prevailed. The conference had the finishing touches put to it that evening at the final banquet.

As it might have been surmised, the social aspects of such a conference are also bountiful. Some of the more notable events included a pub crawl and numerous hotel parties. The pub crawl involved a list of about 40 pubs around Vancouver. A clue to the location of the next pub was obtainable only after each person on the team downed a beer. And so it went for eight pubs in all.

Mention should also be made of the raffle that Wayne won. Those wild guys from Queen's decided to hold a raffle in which the prize was—well, this *is* the Cannon, so maybe you'd better ask Wayne yourself.

Rest your brain—
Exercise your taste buds

IN THE FIRST EVER

Beer Taste-Off

Beer from all breweries

Friday, February 4, 3:30p.m.
Sandford Fleming Cafeteria

Tickets from Ella in the Eng. Soc. offices

An Engineer's Choice

Nuclear Disarmament

To the Engineering Society:

Carl Sagan recently wrote an article, published in the Toronto Star on New Year's weekend, concerning the horrific consequences of nuclear war. He also emphasized that denial of such effects is an operating factor in today's world. Denial, however, is an emotional syndrome, something which humans use when faced with thought or reality of death, whether their own or someone else's. And I have been warned by friendly people (Engineers, no less) not to get emotional in this presentation. (Sigh. We do so well with such tactics because they get our message across with sincerity. But I shall bow to necessity and become what this audience requests: detached.)

The request for a rational, detached presentation apparently comes because there is a certain type of person who finds emotionalism inefficient. This type is possibly use to handling the world as an accumulation of data, which is assessed and used to solve whatever problems face him or her. This scientific empirical approach to problems is most commonly used on our campus in such studies as computer science, medicine, and Engineering. One would thus expect that, when this person approaches the present world situation and assesses the political games which are on-going, the response would be the same: collect data and make an objective analysis before coming to a tentative conclusion.

With this in mind, I approach your Society. Some of the data we all know is that nuclear arms are being stockpiled around the world. Faced with this fact, questions emerge: Why? What? would be the result if they were use? Will they be used? Do more need to be built? These questions need logical answers, not emotional rhetoric. Only with sane, rational answers can one come to a place of sane, rational action.

Why do I come to your Society? Because you in Engineering are devoting you studies, and possibly your future lives, to the furtherance of our technology. You will, if anyone will, have an understanding of our world from the mechanical and computerized standpoint. That's you.

Now, who are "we"? I am a member of UCAM, the U of T Campaign for Nuclear Disarmament. Started last year as an umbrella group for the various peace and environmental groups on campus, it has since developed a life of its own. (active organisms have a way of doing that.) Membership on campus ranges through all levels: faculty, staff, and students, into the hundreds. In our Constitution, it is clearly stated that we are concerned with the over-development of nuclear arms, and wish to use our resources (human and otherwise) on campus both to study the threat and to learn how to deal with it in a constructive, effective way.

One way for us to learn about nuclear technology is to come to the people who study and perpetuate it: the Engineers We have a few of you in our membership, indeed there are two on our Steering Committee, but their specialities are unconnected with our concerns. The most effective way of approaching you, therefor, seemed a presentation such as this. We are asking you to help us learn what you already know: the technology upon which our society is based, and which is being used in the arms race. Why should any of us, at this stage in our lives, be concerned about such things? Because the future is ours and we will shape it according to our talents and training. I am an artist and a writer, and will make a contribution to global peace the best I can along those lines. Many of you, as Engineers, will soon be in positions where you'll be contributing either directly or indirectly to nuclear technology. What we would like to do, before that day comes, is offer you the opportunity to spend time thinking about what that means and assessing all the possibilities.

For the past few years the peace movement and the Engineers seem to have been on opposite sides. Charges and countercharges have been flung in print and verbally. You charge that we're ignorant. Agreed. So educate us. Let us set up seminars as part of our weekly program in which you can criticize, clarify or disagree with what's being presented. We charge that you're perpetuating the denial syndrome which was adhered to by a great portion of society after the second World War, by not paying attention to the results of nuclear testings and a possible war. Because of these charges, I was warned by both Artsies and Engineers that my attempt to enlist your cooperation would meet with resistance and ultimate failure. That may be true. As individuals and a group, you've been dealt with harshly by environmentalists and "peaceniks" (not to mention feminists, who fortunately are't a part of this picture at the moment). The result is that there's an understandable reluctance to put yourselves on the line, either by openly supporting a nuclear

disarmament group (with whose aims some of you might agree), or attempting to aid it in being educated technologically. Why set yourselves up to be shot down? Which, of course, is the response you expect from such groups. You claim that we misunderstand your work, or conversely - that we are politically naive. (For the latter problem, if it be that, we'll go to the PoliSci folks.)

As you will notice, I have not here taken the offensive and accused you of being ready at the drop of a hard hat to make bombs. After all, you're still students. Secondly, when we go out into the big bad world, we inherit a political situation solidified before any of us were born, that of mutual arms deterrent based upon the ability of both sides to destroy the other. You didn't ask for this any more than we in UCAM did.

The reponse some of you make, when being hassled, is that your profession is merely the executor of a bad decision made higher up. You are hired to do a job, not think about "what it means". Apparently you have no difficulty in leaving such questions, as well as the running of society, to the Artsies and MBA's. (I understand that it's a foregone conclusion that whatever an artsy decides is "bad".) You do your job and leave the consequences to others. But it's just this type of response that alienates even those who see the good that Engineers do for us.

Do you have to make such a response? Do you have to leave to others the concerted effort to halt what seems like a mad rush into mutual suicide should war ever start with nuclear weapons?

Let me go back into the years after the second World War for a moment. The people who became our parents and teachers saw the pictures of Hiroshima and Nagasaki, and recoiled in horror. Here at the university, that response was especially strong in those who came back from the war and were set up in Ajax to study Engineering, the veterans who became the first Skulemen. The Faculty took the lead on campus in condemning further development of nuclear arms. Engineering students held seminars on the peaceful use of the skills they were developing. Guest speakers from all over the world advocated restraint on nuclear research, fearing the consequences of governments' desire for weapon strength. You see, your Faculty knew that it held the key to many possible doors of the future, and death lay behind some.

The Buck Stops Here

Truman had made a hit with his statement in those years: "The buck stops here." Whether or not one agrees with the decisions he made, the fact is that he made them and took the responsibility. We admire someone who is that strong, to publicly take a stand (even if we throw stones). That is precisely what your Faculty and your Society did in those years. Not only did you participate in the peace movement, you *ran* it for a couple of years here, from 1950 to 1952 (when some Artsies got annoyed at the way it was being done and split off). Since then, we've had Commie scares, anti-Vietnam demonstrations, diatribes against American imperialism and the Canadian companies who were aiding it, such as Dow Chemical. Yes, the Engineers backed SAC's involvement in such things.

At this point let me ask a question some of you may have on your minds: so what? Who are we to change things? How can our worrying make any difference?

My response to that is, that these are the years when we form our political and social opinions. If you leave campus thinking that the peace movement is a pack of Ignorant Skule-baiters, that's not going to change when you're in a position to do something about the situation. And if the peace pushers leave campus with the image of Engineers as beer-swilling chauvinistic war mongers, that won't change in the years ahead when they deal with your profession.

And who says that the years ahead will see any of us with a chance to change things? I do. I work in the University Archives. I have files on our graduates that hungrily devour newspaper clippings, such people as Bill Davis, Mark McGuigan, Stephen Lewis Bob Rae, John Sewell, Dan Heap, Bora Laskin, even Emmitt Cardinal Carter. Artsies, lawyers, MBA's, computer scientists,....representatives of every Faculty and Institution at the university. And where are our graduate Engineers? Well, I met one recently who works in the National Defense program and he's really proud of those beauties we call cruise missiles, and of Reagan's dense packs: he's working on computer defense programs lining them up against the USSR.

We are the graduates of tomorrow who will someday be forming Canada Into our own mold. We will be making and executing decisions of consequences or else backing those who do. If we can't talk to each other *now,* before we graduate, what will be the state of affairs then? We share a mutual distrust, based (I hope) on misunderstanding and wariness in case of attack. Can't we learn to communicate here, while we have the chance? Can't we break the barrier by attempting to teach each other of our positions?

We have to take a responsibility to ourselves, our future, and the aftermath. Otherwise we become like the German soldiers at Nuremberg who said, "We were only following orders."

I'm asking you to help us.
In exchange, we'll help you.

New Post for Slemon?

Tales From the Mailroom

Brian Vincent
Mailroom

The Dean was aware that, as part of the campaign to save money, the university administration had ordained that incoming mail be sorted by postal code. He had also heard a more recent rumour that, due to error in assigning the postal code, the end result of this decision was that half the Faculty's mail was now being sorted twice with the resulting threat that additional staff might have to be hired to cope with this new efficiency. The work load having been increased by half, this additional staff would be half the existing one, which was one. So the computer centre decreed that half a person was required, and Simcoe Hall translated this into practicality as one person with one arm, and the Dean was aware that in these times of handicapped lib, cripples did not come cheap.

Dean Works In Mailroom

So he decided to investigate the situation at first hand by spending a day in the mailroom and invited me to use his office, secretary and so on in return. The date set for the exchange duly arrived.

There had been other rumours as well, but this wasn't, after all, the sixties, and no routines were altered, no precautions taken. When it came, it came out of the blue.

I was handing a bulky stack of notes, articles, perceptions, letters and other assorted jottings I had been setting aside for weeks in anticipation of this day of free secretarial service to Miss Nourse, the Dean's secretary, when Margaret, Our Lady of the Telephones, quite white and mouthing gibberish, hove into view. After soothing comforts from Mother Nourse, we could decipher 'They're forming'. Barbara McCann, my executive assistant, was more explicit. She had been passing through the Sandford Fleming atrium area and sensing an electricity in the student crowd there had pulled a tweed shawl over her head and, hoping to appear to be an inoffensive Irish beggar woman and therefore go unnoticed, had loitered to overhear that certain malcontents incensed by examination results they deemed inadequate had stirred up the student body to march on, and possibly lay siege to, the faculty offices to force a review in the marking system. Barbara had also noted with one eye left uncovered by the disguising shawl a number of homemade smoke and water bombs disguised as lunch bags and academic baggage, and it was her opinion that things could, but not necessarily would, get nasty.

By now the rest of the Faculty office staff had arrived for the day's work and were aware something was amiss. My first thought was to get the Dean back, and I sent Miss Nourse to the mailroom. There she received no response to her tentative knocks and calls through the shut door. Never having learned to intrude or barge, she got on her hands and knees to peer through the grate at the bottom of the door to see if indeed the Dean were at home. She returned to me to report no visual sighting of the Dean, but he was surely in the mailroom with the door locked since she could hear the periodic sound of mail being pigeon-holed. It seemed that there he was determined to stay.

With alarm, I realized the situation now rested on my shoulders. The Faculty office staff gathered nervous and tittering. The thin voice of a giddy secretary at the back suggested the various departments should be defended and that perhaps we, the Faculty Office, didn't matter. There was an appalled hush. I called on Dean Hewitt to outline our priorities. "Of them, there are many, of us, we are one. Should one or two departments fall, others will remain Should we fall, there is no longer a Faculty of Applied Science and Engineering. Defense at home.' General relief and scattered applause followed this succinct appraisal.

Having decided to resist, we set up a command post in the Dean's office and spies, scouts and varied personnel were sent out to take a look. Barbara McCann was to circulate through the halls in her beggar's shawl, now supported by a shillelagh in token defeference to this time of war, as our communications link between the commander and his troops.

Her first report was encouraging. Dean Hewitt standing on the atrium railing was haranguing the students in the

CLASS OF 8T3

GRADUATION BALL

Saturday, March 19

Downtown Holiday Inn

Tickets available from Club Chairmen soon

"A CLASS EVENT"

well below and was doing loud and continuous work. Dean Leitch was more exposed defending, in a posture of crucifixion, the Faculty Directory Board after having routed a saboteur who was rearranging the room numbers so that someone in search of Continuing Education would end up with the Caretaker instead.

Closer to home, Malcolm McGrath, ever sharp to any opportunity of separating people from their money for the Faculty's benefit, was on the phone to the Globe and Mail to get a photographer up here quick. Dean Wright suggested this would be fatal for our image. Mr. McGrath, expert for years in human relations, pointed out that in philanthropy you need visibility.

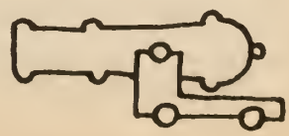
Barbara McCann's subsequent reports were less encouraging. Dean Hewitt as continuing to harangue, but the voice had lost its brightness. One malcontent with a personal spite had told Dean Leitch in passing that he knew exactly where *her* office was. The Registrar's staff was being gradually pressed back toward their office. Billows of smoke were appearing at the end of the hall in the area of growing hubbub. Engineering Science had fallen. David Perry of the Faculty Information Unit wondered if he had perhaps been too hasty in his decision to leave America

Disaster and collapse seemed inevitable. My day as Dean would be memorable indeed. Assorted screams and hysterics were beginning to erupt in the area of Continuing Education. It was by now only a matter of time. Miss Nourse, composed the end, sat, hands poised above her machine, ready to strike the first keys at the bidding of whatever new administration would be directing the Faculty's destiny.

Faculty Surrenders

We decided to surrender with dignity and style by opening wide all the doors so that there would be a vista from the Dean's office clear down the hallway. An appropriate hush fell over the mob as Barbara McCann executed this last order of her Dean-for-a-Day.

Except the hush was not for us. The mob opened, fell back, cleared a path down the hall toward the Sandford Fleming building. Dimly through the smoke we could see a figure pushing a cart. Could it be? Miss Nourse was the first to confirm the sighting. "My Dean! My Dean!" she clasped her hands in transport. The Dean was late starting on his rounds. He had been puzzling over a letter from Karachi addressed to Joe, Department of Engineering, 315 Bloor Street West, University of Buffalo, Toronto, U.S.A.



Engineering Awards Committee

The Awards Committee will accept nominations for the following awards:

1. ENGINEERING SOCIETY AWARD
Awarded to a member of the graduating class who has:

- exhibited leadership and character during his/her 4 years
- have served on the Eng. Soc. in any of his/her 4 years
- good academic standing

2. SKULE CANNON AWARD
Awarded to a member of the graduating class who has:

- exhibited leadership and character during his/her 4 years in the Society
- served as an executive member but not an officer of the Society and not a member of the awards committee
- good academic standing

3. ENGINEERING SOCIETY CENTENNIAL AWARD

$100 awarded to an active member of the first or second year class who passes his year

4. ENGINEERING SOCIETY SEMI-CENTENNIAL AWARD

$100 awarded to a third year student who has served the society in some manner and who passes his year

Nominations should be signed by two nominators with a description of why the nominee should be considered for the award. Letters of nomination should be submitted to the Engineering Society's Awards Committee to the attention of Margie Bawden, Awards Committee Chairperson, by Friday, March 4, 1983

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a school of engineering which prides itself on being at the forefront of technical development should be forced to teach its students using techology developed in the Sputnik era. However, if students are to do more than just deplore the situation then ways must be found to present a unified front to Governing Council through such means as inter-faculty petitions.

We as engineering students comprise one of the largest groups on campus, and thereby are in a position to exercise leadership in student affairs. To assist us in this role we should be looking for ways to strengthen our ties with other students on campus. Towards this end, perhaps the Engineering Society should reconsider its promotion of adolescent-minded stereotypes when referring to students of other faculties.

The emergence of public interest groups as major players in the political process has left few areas of Engineering untouched. In our professional practice, many of us will be dealing with social components of problems which were at one time almost wholly technical in nature. The Engineering Society could provide real leadership to its own members by recognizing and responding to this trend through policies which reflect a greater degree of open-mindedness.

In conclusion, engineering students at U of T have a lot to be proud of: let us build our and raise Skule Spirit on strength of our accomplishments past and present, not on our perceptions of the weaknesses of others.

CED 101S Cancelled

This issue is addressed to all students who feel that there is more to Engineering than simply solving problem sets and performing laboritories. Part of the art of Engineering is the development of a systematic approach to solving a problem.

It has been passed that the CED101S, first year Engineering Design course, be withdrawn from the first year curriculum due to budget constraints. This matter caused a great controversy during the Faculty Council meeting of Jan 26/83. A motion was presented to have the matter investigated by the Committee for Undergraduate Studies. This motion was presented due to the concern of the undergraduate students over the cancellation of this course.

Thanks to the efforts of the student representatives on the Faculty Council and the support of various members of the administration, the issue will not be implemented without great abstention. Any student concern over this matter should be addressed to the editor of the Cannon.

Ron McKenzie
FACULTY COUNCIL

continued from

the problem sets, you're kissing goodbye to 20% of your marks. Not only that, but you won't have anything to study from before exams. If you copy what you can't do yourself, you don't learn all that much right now - but more than nothing - and you get close to 100% on all the problem sets, because the Xerox Theorem rarely fails. Then you can catch up before the midterms or finals. And of course, everybody else makes use of old or keeners' problem sets, so if you don't copy, you are putting yourself at a disadvantage. Naturally, you do not give credits here either, that just isn't done.

You know another good trick. Some profs, though very few, are not too firm about deadlines. The tutors tell you the solutions In the next tutorial, and then you hand in your problems to the prof. You've heard of mathies who have a set due Fridays, and receive solutions from the prof the same day, even though the problem sets may be submitted without penalty as late as Monday. And those mathies who want to hand in late, rumour has it, don't even cheat and take the solutions home for the weekend! Dumb artsies, they are. Won't even go for the guaranteed perfect problem sets.

Copying really doesn't bother you, and why should it? Each prof weekly assigns an amount of work that can reasonably be done in a week. But they forget there are five others doing the same! So your workload is impossible: there is so much to do that no time remains for learning. "Is this the purpose of university?" A rhetorical question. You recall the secure days of high school. You could get all the work done yourself, so there was room in you conscience for an attitude agalnst cheating.

Now it doesn't matter, because you're an engineer.

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trains, aircraft and lake vessels. They want to develop technologies which will find LH_2 advantageous, not just develop systems to convert technologies intended for other fuels (like gasoline) to use LH_2.

Regardless of the type of device used to convert the energy in the LH_2 into a motive power, be it internal combustion engines, fuel cells, turbines, and so on, the very significant problem of on-board LH_2 storage and refueling must be solved before any of these other devices can be employed, since the liquid form of hydrogen is the only practical way to store it in quantities large enough to be useful as a transportation fuel.

Under Dr. Scott's direction, the IHS will be taking full advantage of this unique and fortuitous opportunity to work with and develop the technology which will help to bring hydrogen to the forefront of the world's energy market.

Jock Talk

Engineering Athletics

All the Skule teams are gearing up for an exceptional spring season. Ski day, which was unfortunately cancelled in January is being held during Reading Week at Osler Bluffs. Be there, or be square.

There is a lot of fun stuff coming up soon including a broomball tournament in March, along with the annual S-dance (Jock Party). Remember that now is the time to apply for S-points.

MEN'S ATHLETICS

Senior Hockey

After winning the Quelph Tournament the men's senior team is off to another tourney at Queen's on February 11. In the last game against University College the team tied 2-2. Skule scorers were Chris Perry and Paul Hamel. The team is now tied for third in the standings with Victoria College.

WOMEN'S ATHLETICS

Volleyball

The women have entered 2 teams in Divisions II and III. Both are experiencing successful seasons. The Skule Scramblers have played 4 out of their 8 regular season games and have won 3 of them The women have entered 2 teams in Divisions II and III. Both are experiencing successful seasons. The Skule Scramblers have played 4 out of their 8 regular season games and have won 3 of them. The recreational team has played 3 of 6 regular season games and are undefeated. The teams are likely candidates for play-off berths.

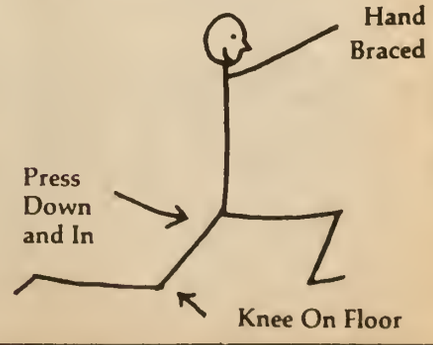
Squash

Three teams are entered for engineering in the squash season. Division I has had 2 wins and 1 loss, division II has suffered 3 losses and division III has a record of 2 wins and 1 loss. There seems to be a good chance that we will have some teams in the playoffs.

Swimming

January 19th saw the annual women's interfaculty swimming meet. Skule women were ahead until the very last race but came second to Trinity by 5 points. Almost 20 girls came out for the team and Angela Facey placed tops for the Engineers.

FRONT THIGH STRETCH



You are invited to attend the annual

WOMEN IN ENGINEERING!

WOMEN'S DINNER

Tues. Feb. 8th 6:00 P.M.

$12.00 per person

at the Austrian Club Edelweiss

207 Beverley St.
(below College)

Buffet Dinner/Cash Bar

THE ENGINEERING STORES

FOR ALL YOUR SCHOOLING NEEDS

Special! Engineering T-shirts $2.80

Last Week to Purchase First year Texts

Paper : 200 sheets	$1.75
500 sheets	$3.97
Yellow pads	47¢
White pads	93¢
Staedler Highlighters: small	84¢
large	$1.17
Erasermate pens	$1.75
"Big Red" pens	$2.76
"Rolling ball" pens	$2.94
Slide-N-Loks	30¢
Vinyl Binders: 5/8"	$1.70
1"	$1.85
File Folders	90¢

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